

Please delete the present tilte, and substitute therefor the following:

~~---~~METHOD OF FABRICATING SEMICONDUCTOR DEVICE HAVING TRENCH ELEMENT SEPARATION STRUCTURE--.

IN THE CLAIMS

Please cancel claims 7 and 8 without prejudice or disclaimer, and amend the claims remaining in the application as follows:

1. (Amended) A method of fabricating a semiconductor device comprising the steps of:

(a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate;

(b) forming a trench having a desired depth at a predetermined position of the circuit formation surface of said semiconductor substrate;

(c) oxidizing [said] a trench portion formed in said semiconductor substrate, exposed in said trench;

(d) burying a buried insulating film into said trench so oxidized; (17)

(e) after burying said buried insulating film, oxidizing said semiconductor substrate; (2E)

[(e)][f] removing said buried insulating film formed on said oxidation prevention film; [and] (2F)

~~[(f)](g) [removing] eliminating said oxidation prevention film formed on [the circuit formation surface of] said [circuit] semiconductor substrate; and ^{2G}~~

~~(h) after said eliminating, forming a gate oxidation film.~~ ^{2H}

2. (Amended) A method of fabricating a semiconductor device comprising the steps of:

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(a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate;

(b) forming shallow trenches having a radius of curvature at corners in a desired position of the circuit formation surface of said semiconductor substrate;

(c) forming [a trench] trenches having a predetermined depth to said shallow trenches having a radius of curvature so formed;

(d) oxidizing [said] trench portions formed in said semiconductor substrate, exposed in said trenches;

(e) burying a buried insulating film into said trenches so oxidized;

~~(f) oxidizing the semiconductor substrate after burying said buried insulating film;~~

~~[(f)](g) removing said buried insulating film formed on said oxidation prevention film; [and]~~

~~[(g)](h) [removing] eliminating said oxidation prevention film formed on [the circuit formation surface of] said semiconductor substrate; and~~

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B2
but
C2
(i) after said eliminating, forming a gate oxidation film.

4. (Amended) A method of fabricating a semiconductor device comprising the steps of:

(a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate;

(b) forming trenches having a predetermined depth at desired positions of the circuit formation surface of said semiconductor substrate;

(c) oxidizing [said] trench portions formed in said semiconductor substrate, exposed in said trenches;

(d) burying a buried insulating film into said trenches so oxidized;

(f) oxidizing said semiconductor substrate after said buried insulating film formed on said oxidation prevention film is removed; [and]

(g) removing said oxidation prevention film formed on the circuit formation surface of said semiconductor substrate; and

(h) after said oxidizing said semiconductor substrate, forming a gate oxidation film.

5. (Amended) A method of fabricating as semiconductor substrate comprising the steps of:

(a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate;

B2 (b) forming shallow trenches having a radius of curvature at corners in desired positions of the circuit formation surface of said semiconductor substrate;

(c) forming trenches having a predetermined depth in said shallow trenches having a radius of curvature;

(d) oxidizing [said] trench portions formed in said semiconductor substrate, exposed in said trenches;

(e) burying a buried insulation film into said trenches so oxidized;

(f) removing said buried insulating film formed on said oxidation prevention film;

(g) oxidizing said semiconductor substrate after said buried insulating film formed on said oxidation prevention film is removed; [and]

(h) removing said oxidation prevention film formed on the circuit formation surface of said semiconductor substrate; and

(i) after said oxidizing said semiconductor substrate,
forming a gate oxidation film.

9. (Amended) A method of fabricating a semiconductor device comprising the steps of:

B3 (a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate,

(b) forming trench regions in said substrate from said circuit formation surface thereof,

(c) performing a first oxidation to form an oxide film on said trench regions formed in step (b), and

B3 (d) forming an insulating film inside said oxidized trench regions so as to completely fill them,

characterized by [a] further [step] steps of:

(e) performing a second oxidation to selectively oxidize an opening side of said completely filled trench regions in said substrate; and

(f) after performing the second oxidation, forming a gate oxidation film.

Please add the following new claims to the application:

Sub C4 --10. A method of fabricating a semiconductor device comprising the steps of:

(a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate; (13)

B4 (b) forming a trench having a desired depth at a predetermined position of the circuit formation surface of said semiconductor substrate; (15)

(c) oxidizing a trench portion formed in said semiconductor substrate, exposed in said trench; (12)

~~(d) burying a buried insulating film into said trench so oxidized; (17)~~

12 112/2 (e) after burying said buried insulating film, increasing a curvature of an upper end portion of said trench;

(f) removing said buried insulating film formed on said oxidation prevention film; and

(g) removing said oxidation prevention film formed on the circuit formation surface of said circuit substrate.

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11. A method of fabricating a semiconductor device according to claim 10, wherein said increasing the curvature includes thermally oxidizing the upper end portion of the trench.

12. A method of fabricating a semiconductor device according to claim 10, wherein said increasing the curvature includes forming bird's beaks at the upper end portion of the trench.

13. A method of fabricating a semiconductor device according to claim 10, wherein said increasing the curvature is performed such that an angle (θ) between the circuit formation surface of the semiconductor substrate and a side surface of the semiconductor substrate forming the trench is within a range of $90^\circ < \theta < 180^\circ$.

14. A method of fabricating a semiconductor device according to claim 10, wherein said increasing the curvature is performed after said removing said buried insulating film.

15. A method of fabricating a semiconductor device comprising the steps of:

(a) forming an oxidation prevention film on a circuit formation surface of a semiconductor substrate;

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10 (b) forming a trench having a desired depth at a predetermined position of the circuit formation surface of said semiconductor substrate;

(c) oxidizing a trench portion formed in said semiconductor substrate, exposed in said trench, so as to increase a curvature of the semiconductor substrate of an upper end portion of said trench;

(d) burying a buried insulating film into said trench so oxidized;

(e) removing said buried insulating film formed on said oxidation prevention film; and

(f) removing said oxidation prevention film formed on the circuit formation surface of said circuit substrate.

16. A method of fabricating a semiconductor device according to claim 15, wherein said oxidizing said trench portion forms a bird's beak at the upper end portion of said trench, so as to increase said curvature.

17. A method of fabricating a semiconductor device according to claim 15, wherein said oxidizing is a thermal oxidation, so as to increase said curvature.--

REMARKS

Applicants have amended their specification in order to correct typographical and grammatical errors. It is respectfully submitted that these amendments to the specification do not add new matter to the application.